

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A data processing method for ~~generating identification data for identifying a plurality of~~ recording media, the method comprising:
~~generating a plurality of identification data for identifying said plurality of recording media, said generating including~~
~~a first step of generating a plurality of different signature data using secret key data of a management side of said identification data to generate a plurality of different signature data; and~~
~~a second step of assigning one of said plurality of signature identification data generated at said first step as said identification data to a plurality of different recording media of said plurality of recording media respectively.~~

2. (Currently Amended) A data processing method as set forth in claim 1, wherein the method further comprising:
~~said first step uses the first data, said secret key data, and predetermined second data to generate generating a signature data of said plurality of signature data using a first data, said first data including said secret key data and a predetermined second data; and~~
~~generating a able to generate said second data using based on an a public key data corresponding to said secret key data and said signature data of said plurality of signature data, for each of a plurality of different first data and, wherein~~
~~said second step generates said identification data including includes a signature data of said plurality of the signature data and said second data, said second data corresponding to~~

~~said signature data for each of said plurality of signature data generated at said first step and assigns the identification data to said recording media.~~

3. (Currently Amended) A ~~program executed by a data processing apparatus computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform a method~~ for generating identification data for identifying recording media, the method comprising:

~~a first routine for using secret key data of a management side of said identification data to generate a plurality of different signature data; and a second routine of assigning said plurality of signature data generated by said first routine using as said identification data to a plurality of different recording media respectively.~~

4. (Currently Amended) A data processing apparatus for generating identification data for identifying recording media, comprising:

~~a first means for using unit configured to use secret key data of a management side of said identification data to generate a plurality of different signature data; and a second means for assigning unit configured to assign said plurality of signature data generated at said first means as said identification data to a plurality of different recording media respectively.~~

5. (Withdrawn) A data processing method for verifying legitimacy of identification data assigned to recording media for identifying the recording media, comprising:

a step of using public key data of the management side of said identification data to verify the legitimacy of said identification data.

6. (Withdrawn) A data processing method as set forth in claim 5, wherein said step has

a first step of generating the first data from said signature data included in said identification data by using said public key data and

a second step of comparing the second data included in said identification data and said first data generated at said first step and verifying the legitimacy of said identification data based on the result of the comparison.

7. (Withdrawn) A program executed by a data processing apparatus for verifying legitimacy of identification data for identifying recording media assigned to the recording media, comprising

a routine for using public key data of a management side of said identification data to verify the legitimacy of said identification data.

8. (Withdrawn) A data processing apparatus for verifying the legitimacy of identification data for identifying recording media assigned to said recording media, comprising:

a means for using public key data of a management side of said identification data to verify the legitimacy of said identification data.

9. (Withdrawn) A data processing method for generating identification data for identifying recording media, comprising:

a first step of using secret key data and data S of a management side of said identification data to generate a plurality of different signature data able to decode said data S based on public key data of the management side and

a second step of generating identification data including signature data and said data S for each of said plurality of signature data generated at said first step and assigning said plurality of identification data to the different plurality of recording media.

10. (Withdrawn) A data processing as set forth in claim 9, further having a third step of writing the encryption data encrypted by using said data S as the encryption key and said identification data into said recording media.

11. (Withdrawn) A program executed by a data processing apparatus for generating identification data for identifying recording media, comprising:

a first routine for using secret key data and data S of a management side of said identification data to generate a plurality of different signature data able to decode the data S based on said public key data of the management side and

a second routine for generating identification data including signature data and said data S for each of said plurality of signature data generated by said first routine and assigning said plurality of identification data to the different plurality of recording media respectively.

12. (Withdrawn) A data processing apparatus for generating identification data for identifying recording media, comprising:

a first means for using secret key data and data S of a management side of said identification data to generate a plurality of different signature data able to decode data S based on said public key data of the management side and

a second means for generating identification data including signature data and the data S for each of said plurality of signature data generated by said first means and assigning said plurality of identification data to the different plurality of recording media respectively.

13. (Withdrawn) A data processing method for verifying the legitimacy of identification data for identifying recording media assigned to recording media, comprising:

a first step of using public key data of a management side of said identification data to generate first data from signature data in said identification data and comparing the first data and second data in said identification data to verify the legitimacy of said identification data and

a second step of decoding encryption data read out from said recording media by using said second data in said identification data when it is verified at said first step that said identification data is legitimate.

14. (Withdrawn) A program executed by a data processing apparatus for verifying the legitimacy of identification data for identifying recording media assigned to the recording media, comprising:

a first routine for using public key data of a management side of said identification data to generate first data from signature data in said identification data and comparing the first data and second data in said identification data to verify the legitimacy of said identification data and

a second routine for decoding encryption data read out from said recording media by using said second data in said identification data when it is verified by said first routine that said identification data is legitimate.

15. (Withdrawn) A data processing apparatus for verifying the legitimacy of the identification data for identifying the related recording media assigned to the recording media, comprising:

a first means for using public key data of a management side of said identification data to generate first data from signature data in said identification data and comparing the first data and second data in said identification data to verify the legitimacy of said identification data and

a second means for using said second data in said identification data to decode encryption data read out from said recording media when it is verified by said first means that said identification data is legitimate.

16. (Withdrawn) A data processing method for generating identification data $ID(w)$ individually assigned to W number of recording media $STM(w)$ where the opened data M is a product of two prime numbers, T is a product of W ($W \geq 2$) number of different prime numbers $p(w)$, w is an integer of $1 \leq w \leq W$, and K is a generator of a cyclic group Z^*M , comprising:

a first step of calculating $(KT/p(w) \bmod M)$ and
a second step of assigning the identification data $ID(w)$ including $(KT/p(w) \bmod M)$ calculated at said first step to the recording media $STM(w)$.

17. (Withdrawn) A data processing method as set forth in claim 16, further having a third step of writing the encryption data encrypted by using $(KT \bmod M)$ as the encryption key and said identification data $ID(w)$ into said recording media $STM(w)$.

18. (Withdrawn) A program executed by a data processing apparatus for generating identification data $ID(w)$ individually assigned to W number of recording media $STM(w)$ where opened data M is a product of two prime numbers, T is a product of W ($W \geq 2$) number of different prime numbers $p(w)$, w is an integer of $1 \leq w \leq W$, and K is a generator of a cyclic group Z^*M , comprising:

a first routine for calculating $(KT/p(w) \bmod M)$ and
a second routine for assigning identification data $ID(w)$ including $(KT/p(w) \bmod M)$ calculated by said first routine to the recording media $STM(w)$.

19. (Withdrawn) A data processing apparatus for generating identification data $ID(w)$ assigned to W number of recording media $STM(w)$ where opened data M is a product of two prime numbers, T is a product of W ($W \geq 2$) number of different prime numbers $p(w)$, w is an integer of $1 \leq w \leq W$, and K is a generator of a cyclic group Z^*M , comprising:

a first means for calculating $(KT/p(w) \bmod M)$ and
a second means for assigning identification data $ID(w)$ including $(KT/p(w) \bmod M)$ calculated by said first means to the recording media $STM(w)$.

20. (Withdrawn) A data processing method for verifying a legitimacy of identification data for identifying recording media assigned to the recording media, comprising:

a first step of verifying whether or not data p included in said identification data is a prime number;

a second step of using data IDKey and said data p included in said identification data and opened data M to calculate $(IDKey \bmod M)$ when it is verified at said first step that said data p is a prime number; and

a third step of using a decoding key obtained based on $(IDKey \bmod M)$ calculated at said second step to decode encryption data recorded at said recording media.

21. (Withdrawn) A program executed by a data processing apparatus for verifying a legitimacy of identification data for identifying recording media assigned to the recording media, comprising:

a first routine for verifying whether or not data p included in said identification data is a prime number;

a second routine for using data IDKey and said data p included in said identification data and opened data M to calculate $(IDKey \bmod M)$ when it is verified by said first routine that said data p is a prime number; and

a third routine for using a decoding key obtained based on $(IDKey \bmod M)$ calculated by said second routine to decode the encryption data recorded in said recording media.

22. (Withdrawn) A processing apparatus for verifying a legitimacy of identification data for identifying recording media assigned to recording media, comprising:

a first means for verifying whether or not the data p included in said identification data is a prime number;

a second means for using the data IDKey and said data p included in said identification data and opened data M to calculate $(IDKey \bmod M)$ when it is verified by said first means that said data p is a prime number; and

a third means for using a decoding key obtained based on $(IDKey \bmod M)$ calculated by said second means to decode the encryption data recorded in said recording media.

23. (Withdrawn) A data processing method for generating identification data $ID(w)$ assigned to each of W number of recording media $STM(w)$ when data which is the product of the prime numbers q_1 and q_2 and is opened is M , w is an integer of $1 \leq w \leq W$, $W (W \geq 2)$ number of different data are $e(w)$, $e(w)$ is a generator of a cyclic group Z^*M , $e(w)$ and $\lambda(M)$ are primes with respect to each other, and $\lambda(M)$ is the least common multiple of (q_1-1) and (q_2-1) , comprising:

a first step of using the data S of the generator of a cyclic group Z^*M to calculate $(Sd(w) \bmod M)$, the data $d(w)$ of the reciprocal of $e(w)$ when $\lambda(M)$ is normal, and said data M and

a second step of assigning identification data $ID(w)$ including the $(Sd(w) \bmod M)$ calculated at said first step to the recording media $STM(w)$.

24. (Withdrawn) A data processing method as set forth in claim 23, further having a third step of writing the encryption data encrypted by using said data S as the encryption key and said identification data $ID(w)$ into said recording media $STM(w)$.

25. (Withdrawn) A program executed by a data processing apparatus for generating identification data $ID(w)$ assigned to each of W number of recording media

STM(w) when data which is a product of prime numbers q1 and q2 and is opened is M, w is an integer of $1 \leq w \leq W$, W(W \geq) number of different data are e(w), e(w) is a generator of a cyclic group Z^*M , e(w) and $\lambda(M)$ are primes with respect to each other, and $\lambda(M)$ is the least common multiple of (q1-1) and (q2-1), comprising:

a first routine for using the data S of the generator of a cyclic group Z^*M , the data d(w) of a reciprocal of e(w) when $\lambda(M)$ is normal, and said data M to calculate (Sd(w) modM) and

a second routine for assigning identification data ID(w) including (Sd(w) modM) calculated by said first routine to the recording media STM(w).

26. (Withdrawn) A data processing apparatus for generating identification data ID(w) assigned to each of W number of recording media STM(w) when data which is a product of prime numbers q1 and q2 and opened is M, w is an integer of $1 \leq w \leq W$, W(W \geq) number of different data are e(w), e(w) is a generator of a cyclic group Z^*M , e(w) and $\lambda(M)$ are primes with respect to each other, and $\lambda(M)$ is the least common multiple of (q1-1) and (q2-1), comprising:

a first means for using the data S of the generator of a cyclic group Z^*M , the data d(w) of a reciprocal of e(w) when $\lambda(M)$ is normal, and said data M to calculate (Sd(w) modM) and

a second means for assigning identification data ID(w) including (Sd(w) modM) calculated by said first means to the recording media STM(w).

27. (Withdrawn) A data processing method for verifying a legitimacy of identification data for identifying recording media assigned to the recording media, comprising:

a first step of using data e and data I included in said identification data and opened data M to calculate $(Ie \bmod M)$ and

a second step of using $(Ie \bmod M)$ calculated at said first step as the decoding key to decode the encryption data recorded in said recording media.

28. (Withdrawn) A program executed by a data processing apparatus for verifying the legitimacy of identification data for identifying recording media assigned to the recording media, comprising:

a first routine for using data e and data I included in said identification data and opened data M to calculate $(Ie \bmod M)$ and

a second routine for using $(Ie \bmod M)$ calculated by said first routine as the decoding key to decode the encryption data recorded in said recording media.

29. (Withdrawn) A data processing apparatus for verifying a legitimacy of identification data for identifying recording media assigned to the recording media, comprising:

a first means for using data e and data I included in said identification data and opened data M to calculate $(Ie \bmod M)$ and

a second means for using $(Ie \bmod M)$ calculated by said first means as the decoding key to decode encryption data recorded in said recording media.

30. (Withdrawn) A recording medium for recording data, recording identification data generated by using secret key data of a management side of said recording medium, verified in legitimacy based on the public key data of said management side, and identifying the recording medium.

31. (Withdrawn) A recording medium for recording data, recording identification data including signature data used for generating first data by using public key data of a management side of said recording medium and said second data used for verifying a legitimacy of the identification data by comparing the same with said first data and identifying said recording medium.

32. (Withdrawn) A recording medium for recording encryption data, recording identification data including

data p of a prime number and
data IDKey used for calculating $(IDKey \bmod M)$ of content key data used for decoding said encryption data together with said data p and the opened data M and identifying said recording medium.

33. (Withdrawn) A recording medium for recording encryption data, recording identification data including data e used for calculating $(e \bmod M)$ of content key data used for decoding said encryption data together with opened data M and data I and identifying said recording medium.

34. (New) The data processing method as set forth in claim 2, the method further comprising:

verifying legitimacy of said identification data using a result of comparing said first data to said second data.

35. (New) The data processing method as set forth in claim 34, the method further comprising:

generating an identification revocation list, wherein said identification revocation list includes identification data corresponding to an unauthorized recording media.

36. (New) The data processing method as set forth in claim 35, the method further comprising:

writing an encrypted content data to an authorized recording media of said a plurality of recording media, wherein said authorized recording media has an identification data which is both verified in said verifying and is not generated in said generating an identification revocation list.